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## (54) HIGH STRENGTH POLYETHYLENE FIBER

## (57)Abstract:

PURPOSE: To provide the high strength porous fiber comprising polyethylene having a less weight than those of other polymer raw materials, excellent in adhesivity to matrix materials, and having a low cost.

CONSTITUTION: The high strength polyethylene fiber having a fiber diameter of  $1-500\mu m$  and a tensile strength of  $\geq 8g/cm3$  is characterized in that the fiber comprises polyethylene having a density of  $\geq 0.960g/cm3$ , preferably  $\geq 0.965g/cm3$ , and a mol.wt. of 150000-1000000, preferably 200000-1000000, that the center of the fiber is substantially non-porous, and that fine pores having an average pore diameter of  $0.01-2\mu m$  exist in a porosity of 20-90% in a range of  $0.2-5\mu m$  in thickness from the surface of the fiber.

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